

REMARKS

Claim 1 has been amended to further specify the additional UV filters in part d): "additional UV filter(s) selected from the group consisting of an acrylate, a cinnamate derivative, a p-aminobenzoic acid derivative, a benzophenone, an ester of benzalmalonic acid, an ester of 2-(4-ethoxy-anilinomethylene)propandioic acid, a pigment, a salicylate derivative, a UVA screening agent, salts thereof, and combinations thereof." Support for this amendment may be found in the specification, at for example, page 11, line 11 to page 12, line 24.

Claim 6 has been amended to recite "wherein the additional UV filter(s) of d) are selected from the group consisting of disodium phenyl dibenzimidazole tetrasulfonate, benzophenone-3, benzophenone-4, TiO₂ and ZnO." Support for this amendment may be found in original claim 6. *See In re Gardner*, 177 USPQ 396, 397 (CCPA 1973) and MPEP §§ 608.01(o) and (l).

Claims 12-24 have been added. Claims 12-22 depend from claim 1 and recite specific UV filter(s) recited in part d) of claim 1. Support for these amendments may be found in the specification, at for example, page 4, lines 1-12; and page 11, line 11 to page 12, line 24. Claims 23 and 24 are modeled after claim 1, but differ in the transitional phrase used, "consisting essentially of" (claim 23) and "consisting of" (claim 24). Support for claims 23-24 may be found in the specification as, for example, page 4, lines 1-12, and in original claim 1. (*Id.*)

No new matter has been added by any of the amendments or added claims.

Obviousness Rejection

Claims 1, 6 and 7 stand rejected solely under 35 U.S.C. § 103(a) as being unpatentable over by EP 0979645 to Gozenbach *et al.* ("Gozenbach") in view of US patent publication No. 2004/0047817 to Bonda *et al.* ("Bonda") (Paper No. 20110811 at 4).

Gozenbach discloses cosmetic light-screening compositions containing 2-phenylbenzimidazol-sulfonic acid (PBSA) or a salt thereof and a polysiloxane compound (Gozenbach, page 9, lines 55-57). Gozenbach further discloses that this combination of the polysiloxane compound and PBSA or a salt thereof may optionally be used in combination with other known UV-A and/or UV-B filters (*Id.*, page 6, lines 26-28). As suitable UV-B filters and UV-A filters, a large laundry list of compounds is disclosed belonging "to the widest classes of substance" (*Id.*, page 6, line 29 to page 7, line 2). All of the light-protecting compositions Gozenbach discloses include 2-phenylbenzimidazol-sulphonic acid or a salt thereof. (See, e.g., Gozenbach, Abstract, para. 6, 22, 23, 26, and 39.)

Bonda discloses "a method of preparing a sunscreen including a solvent system and a filter system, the method including the step of controlling the polarity of the solvent system to control the rate of photodecay of the filter system" (Bonda, Abstract). Bonda also discloses the preferred range of more than 25 cosmetically

acceptable photoactive compounds and concentrations for products marketed in the U.S. and in the European Union (Bonda, column 5, line 45 to column 6, line 34).

In making the rejection, the Examiner summarily asserted that Gozenbach discloses "light screening compositions comprising the same polysiloxane-based UV filters as claimed in claim 1 (page 1-5), which read on polysilicone-15 (Parasol SLX), the same additional UV filters as claimed in claims 1 and 6, phenylbenz-imidazole sulfonic acid and methylene bis-benzotriazo tetramethylbutylphenol (Tinosorb M)) (page 6), a carrier (aqueous phase and fatty phase) (abstract), as pertaining to claim 1, and percentages of said polysiloxane-bases UV filter and said additional UV filters as pertaining to the ratio of claim 7 ([19] and claim 8)." (Paper No. 20110811 at 4).

The Examiner, however, acknowledged that Gonzenbach does not "teach percentages for Tinosorb M or that the percentage present for said polysiloxane based UV agent is less than the sum amount of UV filters b) and d) as pertaining to claim 7." (*Id.*) To fill in the acknowledged gaps, the Examiner relied on Bonda. The Examiner asserted that "Bonda teaches that Tinosorb M is typically present up to 10%" (*Id.*) The Examiner further relied on Bonda and asserted that "[r]egarding claim 7, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to produce the formulations of Gonzenbach [] with, 10% phenylbenzimidazol[,] 5% of said polysiloxane based UV agent, and 10% Tinosorb M as taught by Bonda et al. in order to produce the invention of instant claim 7." (*Id.* at 5) The Examiner additionally asserted that "[o]ne of ordinary skill in the art would have been motivated to do this because both references teach to UV agents such as Tinosorb M[,] and Bonda teaches a preferred percentage limit for Tinosorb M" and that "it would have been

obvious to utilize up to and including the maximum preferred amount of Tinosorb M of Bonda, in the formulations of Gonzenbach et al. in order to use said components in known and preferred amounts." (*Id.*)

As set forth in the previous response, the combinations of Parsol SLX and the recited specific additional UV filters having a chromophore with bulky substituents show a surprisingly high SPF and ratio of SPF/UV filter (Σ). For comparison, we take the best-performing formulation disclosed in Gonzenbach, or the formulation that exhibits the most synergy: 5 wt% P3 and 1 wt% PBSA.

Composition according to		Gonzenbach	Present Invention		
		Example 4/5	Example 1, formulation 4a	Example 1, formulation 4c	Example 2, formulation 2
Compound recited in (a)	Polysilicone-15 (Parsol SLX)	5	2.5	2.5	4
Compound recited in (b)	Tinosorb M				4 that are 50% active (or 2% active)
	4-methylbenzylidene camphor		4		
	2-(4-diethylamino-2-hydroxy-benzoyl)-benzoic acid hexylester			3	
Other UV filter (compound recited in (d))	Butyl methoxydibenzoylmethane		3		
	Phenylbenzimidazole sulfonic acid	1	2	2	
Total active UV filter content (wt%)		6	11.5	7.5	6
SPF		8.1	31	19	13
Ratio SPF/Σ (total active UV filter)		1.35	2.7	2.53	2.1

As shown by the results above, the compositions formed by the combination of (a) polysilicone-15 (Parsol SLX) and (b) 2-(4-diethylamino-2-hydroxy-benzoyl)-benzoic acid hexylester, 4-methyl benzylidene camphor, or methylene bis-benzotriazo tetramethylbutylphenol and optionally (d) additional UV filters provide UV-filtering compositions have a surprisingly high SPF and ratio of $\text{Ratio SPF}/\Sigma$ (UV filter) in comparison with the best performing combination of UV filters disclosed by Gonzenbach.

As is well known, a greater than expected result is an evidentiary factor pertinent to the legal conclusion of obviousness ... of the claims at issue." *In re Corkill*, 711 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985). Thus, it is respectfully submitted that the claims previously presented to the Examiner are not obvious in view of the combination of Gonzenbach and Bonda.

With a view towards furthering prosecution in the present application, independent claim 1 has been amended to recite that the additional UV filter(s) of d) are "selected from the group consisting of an acrylate, a cinnamate derivative, a p-aminobenzoic acid derivative, a benzophenone, an ester of benzalmalonic acid, an ester of 2-(4-ethoxy-anilinomethylene)propandioic acid, a pigment, a salicylate derivative, a UVA screening agent, salts thereof, and combinations thereof." Thus, as amended, independent claim 1 is directed to a composition comprising Parsol SLX, plus one of the following 3 compounds:

- (1) 2-(4-diethylamino-2-hydroxy-benzoyl)-benzoic acid hexylester,
- (2) 4-methyl benzylidene camphor,
- (3) methylene bis-benzotriazo tetramethylbutylphenol (Tinosorb M),

and specific additional UV filters that do not recite imidazole derivatives, such as 2-phenyl benzimidaole sulfonic acid and its salts.

It is respectfully submitted that the combination of Gozenbach and Bonda do not render amended claim 1 obvious. As noted above, all of the light protecting compositions disclosed by Gozenbach include 2-phenylbenzimidazol-sulphonic acid or a salt thereof. See, e.g., Gozenbach, Abstract, para. 6, 22, 23, 26, and 39. In contrast, independent claim 1 of the present application has been amended to recited specific additional UV filters that do not recite 2-phenyl benzimidaole sulfonic acid and its salts. Furthermore, because the Examiner relied on Bonda solely for the disclosure of Tinosorb M (See, for example, Paper No. 20110811 at 5), Bonda cannot fill the gap left by Gozenbach with respect to amended claim 1. Thus, the combination of Gozenbach and Bonda cannot render the amended independent claim 1 obvious.

Lastly, we note that the Examiner has identified no deficiency in Gozenbach that would send one skilled in the art looking to modify the disclosed compositions. Indeed, Gozenbach discloses that its compositions provide "synergistically enhanced protection indices." (Gozenbach, page 3, line 20). As is well settled, a motivation to combine prior art teachings much be supported by an articulate reasoning with rational underpinnings. Here neither Gozenbach nor Bonda teach the desirability of combining the material recited in the claims. But, that was the Examiner's burden. See e.g., *Ex parte Koepnick*, 2011 WL 1661490, *3 (B.P.A.I.).

Furthermore, the dependent claims cannot be obvious as well. See, e.g., *In re Fine*, 5 USPQ2d 1596, 1600 (Fed. Cir. 1998) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.")

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For the foregoing reasons, entry of the amendments and allowance of the claims are respectfully requested. If the Examiner has any questions, please contact the undersigned.

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